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ABSTRACT

This seminar paper explores the relationship between technology and society, based on the position that man has not developed a social system that gives adequate guidance to technology. The hypothesis is that if technology has no priority, then it has no purpose. Talcott Parsons' concepts of functional imperatives and pattern variables are discussed to illustrate the relationship of technology to society. From Parsons' framework, it is determined that the United States is an adaptive society with nondirected technology and that technology is not functioning correctly in the United States. Its dysfunction is exhibited in the current incompatibility of energy conservation and technological exploitation. A new look at national purpose is needed for guiding U.S. technology at correct intensity levels. Technology should be made a societal concern and this concern should be internalized in individuals. Thus, the United States must change to another type of society which will rank technology so that it functions within the society. If this interpretation is true, then (1) the United States inevitably will change from an adaptive society to a goal-attainment society concerned with means-manipulation, and (2) there will be greater tolerance of deviance and accelerated recognition of the "common good." (MD)

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TECHNOLOGY AND EDUCATION - NON-PRIORITIZED TECHNOLOGY IN AN ADAPTIVE SOCIETY: A SOCIO-POLITICAL VIEW

by

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Preface

This paper was presented as one in a series of seminars on Man, Society, and Technology, conducted by the program of Technology Education at West Virginia University during the 1973 summer session. Over fifty individuals, including faculty and students from the university as well as individuals associated with the university through other institutions and endeavors, participated in the seminars.

The seminars were dedicated to a better understanding of the modes of inquiry, basic assumptions, principles, and concepts used by members of various disciplines and professions as they pursue answers to questions concerning the nature of man and technology in relation to the problems and issues associated with ecology, work, theology, law, medicine, politics, education, and economics; and questions concerning values, technological assessment and forecasting.

One overwhelming conclusion was the realization that the complex issues and problems associated with technology are related directly to decisions which are functions of value systems. Values require examination and reassessment. The educated citizen of tomorrow can not be trained as a narrow specialist nor can the humanist remain technologically aloof or illiterate. Education for the future may mean a rebirth of the renaissance man and perhaps a reevaluation of the technologies and humanities and the creation of a new interdisciplinary effort called the "techmanities."

Dr. Monahan explores the relationship of technology and society based on the position that at this stage of our existence we have not developed a social system with the commitment or means for attaching priority to technology. Therefore, our technology is non-purposeful. This is an interesting thesis which has considerable merit when considered in the light of today's world.

The basic question may be whether we should alter our thinking to attain a directed technology and a free society or a directed society with a non-purposeful technology.

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September, 1976

NON-PRIORITIZED TECHNOLOGY IN AN ADAPTIVE SOCIETY: A SOCIO-POLITICAL VIEW

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In this brief paper, I want to present what may seem better-put as a "dead-center" hypothesis regarding the interdependent relationship of technology and society.

The frame of reference is that of Talcott Parsons' general theory and, specifically, his concepts of "functional imperatives" and "pattern variables."[1]

It is impossible to present a coherent explanation of the relevant dimensions of Parsons' theoretical notions in such a brief analysis as this. And even the essential discussion is fraught with so much meaningful hazard as to probably make such

[1]Talcott Parsons, "General Theory in Sociology," in R. K. Merton L. Broom, and L. S. Cottrill, Jr. Sociology Today, (New York: Basic Books, Inc., 1959) pp. 3-39.

notions equally obscure. Still, the fundamental idea that I want to posit cannot be entertained without some such explication. So, then, here goes!

The Hypothesis

If my language is inexact, I take the blame for not knowing enough how to communicate the concepts rather than that the language itself is the fault; but in essence, I might put the notion in the shape of the following paradigm.

I. Postulates

1) Ours is an adaptive society.

2) In an adaptive society, emphasis is in favor of means-oriented or "instrumental" activity rather than to ends-oriented, or "consumatory" activity.

3) Thus, technology is geared to the pursuit of purpose more than to its achievement or its definition.

II. Derivations

1) Consequently, purpose-definition must be broadly conceived and temporally critical.

2) Without temporal criticality, technology becomes non-purposeful.

3) Thus at this time, we are without a clear basis for attaching significant priority to technology and therefore, our technology is non-purposeful.

III. Hypothesis

1) If a technology is non-purposeful, it is without overall psycho-social motivation and therefore meanders within only the exegencies of the free market economy.

2) If a technology is meandering, it follows a pattern of consolidating its gains and values rather than innovating and exploring new patterns.

3) If that is indeed theoretically sound, then the quality of technology under such circumstances will be neutral rather than affective; specific rather than diffuse; particular rather than universal; and "self" rather than collectivity-oriented.

4) And if that is also the case, the society is likely to be in a state of change from adaptive to something else.

Discussion

That is surely not a terribly "tight" paradigm but it serves my purposes in such a tentative argument as I shall pursue.

Parsonian Concepts

As previously stated, one can only "touch" Parsons' general theory and even then with some trepidation. He really began the formulation of his ideas as a doctoral student at Heidelburg when he came strongly under the influence of the German school of sociologists and especially Weber, and still earlier

at the London School of Economics (1924-25) with Hobhouse, Ginsberg, and the anthropologist Bronislaw Malinowski.

His first major work toward developing the general theory was Structure of Social Action in 1937. Many papers, special lectures, and articles elaborated the scheme and then, following his seminar at Harvard in 1949, came the major scheme, The Social System, 1951. As with any first-rate theorist, he has modified the theory over time but the major dimensions of it remain. Let me then briefly present these:

The Functional Problems

Parsons' is a theory of social action. For him, all events and relationships must be conceived in terms of action and these in terms of actors. Parsons' asserts that any system, organization, or institution is structured along two major axes - first, any such system must be bounded by what "goes on" within it and what it must do to mediate with its environment:

EXTERNAL

INTERNAL

Secondly, any such system must give attention to the nature of its goals on the one hand and to the means available for pursuing such goals on the other:

MEANS | ENDS

When these two axes are dicotomized, they produce four significant cells which define the four major problems confronted by all social systems, whether a club or a nation.

	MEANS	ENDS
EXTERNAL	Adaptation	Goal-Attainment
INTERNAL	Pattern-Maintenance	Integration

Although all systems must attend all four of these problems, some by their natures are designed (structured) to deal primarily with one or another of them. Thus schools in any society are primarily "pattern-maintenance" systems whose generalized function is to reflect the dominant values of the community and society and to "maintain the pattern." Yet, of course such systems have goals and goal-attainment processes to which they must also give attention.

Police and other security systems are primarily "integration" systems whose function is to provide the security necessary to allow other components of the social system to cycle through their action sequences.

Most corporate systems are primarily "adaptive" organizations, mediating with the immediate environment in terms of productivity and market economics; while political systems and governmental agencies (policy systems) are goal-attainment mechanisms.

These are badly over-simplified illustrations but hopefully they serve the purpose of pursuing my "notions."

Now a key to this scheme is its generalize-ability; i.e., it is as applicable to the concrete individual as to the nation. With reference to the latter, Parsons holds that societies also fit this scheme. Ours' is an adaptive society thus our primacy is to instrumental activities, to means. The Soviet Union, on the other hand gives primacy to goal-attainment activities. Thus elaborate definitions of desired goal-status determine the utilization, manipulation, and management of means. In our own case, we somewhat withdraw from the establishment of goal-status preferring rather that our dynamism is a function of attention to means and those in turn will constitute operational definitions of purpose. The Indo-Asian societies, with strongly indoctrinated values regarding status and rigid privilege, are pattern-maintenance societies.

Now most of the segmented institutional structures "down-the-line" are designed to support these over arching functional values even to the isolated individual. Yet any system really functions in terms of the ways its various sub-components - either organizations or individuals - relate to each other and Parsons handles that in terms of an attempt to characterize the variations in patterns of interaction such sub-components follow. Moreover,

he has theorized that there are really only five major variables of such patterns. These are:

1) Affectivity/Neutrality

In some relationships, interaction is likely to be neutral as, say between a doctor and patient; whereas in others, it is likely to be affective, as between a husband and wife.

2) Specificity/Diffuseness

This has merely to do with the scope of a relationship - some such interactions "take in" more than others. Again, the marriage relationship is diffuse, but that between a clerk and a customer is specific.

3) Universalism/Particularism

This refers to categorization of the sub-components of interaction. That is, in some relationships objects are judged either on universalistic grounds or on particularistic ones. Whether one is a good doctor, or a competent secretary, are presumably governed by certain universal criteria but my doctor, or my secretary is a particular matter. Parsons has used nepotism as an illustration of a situation in which particularistic criteria have precedence over universalistic ones.

4) Ascription/Achievement

This is another dimension of categorical imperatives. In this variable, the issue is merely whether quality takes precedence

over performance. If a policeman stops a "lady driver" for some infraction, does he respond to the "lady" (ascriptive) or to the "driver" (achievement)? The consequence could be quite different.

5) Self/Collectivity

This variable is somewhat in a category by itself and has to do with attitudes in mediating between different levels of heirarchy. It is a matter of whether one acts in terms of a self or a "larger" concern. If a Dean acts in some matter in terms of what he conceives is the best interest of his college, he leans toward self. If, however, he acts in the best interests of the university when it may be somewhat painful to the college, he leans toward collectivity.[2]

Some Additional Background

If one reads Tocqueville's Democracy in America, he cannot help but be struck by the premise that democratic systems are by their nature, adaptive societies. Tocqueville held that the sources of power of democratic societies is the equalization of status and the neutralization of rank and privilege, and that there is a strong affinity between "... the lower classes and

[2]For a more detailed discussion of these variables and of Parsons' scheme, see W.G. Monahan. Theoretical Dimensions of Educational Administration Chs. 6 and 8. (New York, Macmillan and Co., 1975.) Also see: Max Black (ed.) The Social Theories of Talcott Parsons (Englewood Cliffs: Prentice-Hall, 1961.)

centralized power. The central government is the only means whereby people can wrest the management of local affairs from the aristocracy."[3]

And finally, that not only does warfare have a centralizing effect on democratic administration but that, as well, the military "class" has little status in democratic societies except in time of war.

> "Thus the democratic tendency that leads men increasingly to multiply the privileges of the state and to circumscribe the rights of private persons is much more rapid and constant among those democratic nations that are exposed by their position to great and frequent war than among all others."[4]

The adaptive society thus places universalistic inherent value on war but particularistically deplores it. It is reasonably necessary to the definition of overarching purpose for developing technology and it is a truism that technology multiplies in achievement and conceptualization in such national crises.

In "slack" times, the adaptive society must "switch" the primacy of its attention to internal functions--pattern-maintenance and integration. Thus there is a trend toward

[3]Robert Nisbet. The Sociological Tradition. (Basic Books, 1966) p. 122.

[4]Tocqueville, Alexis de. Democracy in America, p. 300 - cited in Nisbet, op. cit., p. 123.

conservatism in outlook and style. The adaptive society has no tradition--or, at least, no well-defined one--for coping with lack of, or slowed growth since growth is the purpose of an adaptive culture. Schools, families, religious institutions are all placed on the alert to solve dysfunctions that occur as variables of patterns of interaction as people and organizations become "out of balance." That is, where affectivity should take precedence, neutrality does; where performance should be the congruent concept with a means-oriented system, qualitative, or ascriptive attitudes tend to become primary and that is also incongruent with the dominant values pattern.

In more concrete terms, our explorations of space have slowed, thus the technology at the disposal of (and generated by) that commitment has not found an equally viable "rationalization" for means-manipulation and invention. Warfare is neutralized through national fatigue and incompetent centralized management of the bases for warfare. Mismanagement here, in a kind of abstract analysis, is accused in virtue of the fact that centralized powers could not redirect attitudes and commitments away from particularistic criteria in favor of universalistic ones. Thus it was almost impossible to evoke the notion that we were indeed "saving the world for democracy" because there was no logical threat to the survival of "our" institutions from an

episode that also (though the notion of its configuration differed dramatically) was equally logically comparable to our own individualistic nationalistic historical "urges" for self-determination. And the current preoccupation with energy issues is incompatible with the adaptive culture.

This last will require some slight expansion.

The Dysfunction of the Energy Issue

It is my thesis that the "credibility gap" on the energy crisis as well as the major thrust of the energy problem itself - all of these related concerns, are manifestations of the larger problem that any adaptive social system confronts when the weight of the emerging evidence is in favor of their having reached an evolutionary point at which adaptation is no longer "real," i.e., that the conditions within which such a cultural system functions can no longer justify means-manipulation without clear-cut transitions from "adaptation" to "goal attainment."

The curious dysfunctions exhibited in the energy issue pivot on the incompatibility of conservation with exploitation. As a significant analogy, the banking industry discovered in about 1945 that to continue to counsel clients to "save" was tantamount to disaster; "spend" was the open seseme to growth and survival. Yet, here we are asking people again to "save" (conserve) because "tomorrow may be cataclysmic otherwise." Yet, our whole values-

system as a culture is a spending culture not a saving one. But without a "new" rationale for guiding the overall development of "our" kind of technology at the levels of intensity that some kind of national purpose will normally create - be it war, or space exploration, or similar justification for massive retooling, the whole issue of economic growth and revitalization will rest upon too trivial manipulations for the normal consumer spin-offs that always characterize such massive commitments.

The answer--or at least one--is an equally massive commitment to the development, (and application of technology thereby,) for new energy explorations. But such commitments cannot occur in our type of society in their own right. They are no more persuasive than is the idea of physical exercise for its own sake; the great majority of Americans want the activity of exercise to come as a by-product of some more justifiable purpose; we must, largely, be engaged in something else--tennis, golf, competition, games and play, and if our physical conditioning is improved thereby - fine! That's a wonderful consequence, but it can't be our major thrust. Even merely riding a bicycle to work is not as satisfying in and of itself as the aesthetic experience of enjoying the smell of fresh air and the intimate relationship we enjoy with the budding of the trees!

A Non-Purposeful Technology

In effect, then, I have posited the notion that at present we find ourselves, in the theoretical tradition of a truly adaptive culture, as the world's almost foremost technological culture and that we have simultaneously, a non-purposeful technology.

Now such an assertion begs for qualification and that is why, on sober reflection, I softened the title of this paper somewhat by using the phrase, a "non-prioritized" technology. Yet, the meaning is similar all the same when one moves "up the ladder of abstraction." Of course all human behavior is purposeful; of course all social systems action is motivated; of course technological activity has purpose and is imbued with reason. We can't really argue such propositions in any psycho-analytic frame nor probably, in the immediacy of the "short-run" in any socio-political framework as well.

Yet, my general hunch remains: we are wanting a priority that is imbued with severe purpose and that can be smoothly articulated into a societal concern and internalized in the individuals who constitute a collectivity.

Some Speculative Conclusions

If the case is as I have fashioned it, so what?

Two possible realities occur to me and they are not particularly startling revelations.

First, I think we will - must (translated, "inevitable"), see an increasing transition away from an adaptive society more or less obsessed with means and means-manipulation, to a goal-attainment society. Such a society need not, nor likely will, follow the same or even similar pattern as the more familiar socialistic societies are following similar patterns. But with all goal-attainment systems, we shall have more and more in common: increasing centralization of power and authority, freedom defined more and more in terms of collectivity rather than self. The continued emergence of an aristocracy of bureaucracy rather than of private property, and increasing dependence on planned change (R&D?) rather than ideosyncratic novelty.

We shall likely see, as well, a greater tolerance of deviancy and an accelerated recognition of what is in the best interest of the "common good." There will increasingly emerge a "party line" though we will never refer to it that way and its fundamental motto will surely remain "one for all, and all for one" which can easily mean whatever we want it to mean.

These are not, as I see it, particularly pessimistic prognostications for the inevitability of history is value-free - it is rather like the small piece of wisdom inscribed above the

door of an ancient Flemish cathedral which held: "It is; it can never be otherwise."

Our major interest, I think, has merely to do with How it is. And our ability to understand these things has everything to do with just how "otherwise" it may ultimately turn out to be.